Master's Thesis of Public Administration

Economic Performance of the Former Soviet Union Countries:
The Role of the WTO Membership

세계무역기구 가입이 체제전환국의 경제발전에 미치는 영향 분석

August 2020

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Submitting a Master's thesis of Public Administration

April 2020

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Confirming the master's thesis written by
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June 2020

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Abstract

Economic Performance of the Former Soviet Union Countries:
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In September 2017, the Government of the Republic of Uzbekistan resumed the suspended process of WTO accession negotiations. In this regard, the impact of WTO membership on the economic growth of the countries is particularly relevant for the Republic of Uzbekistan in order to take important measures and apply appropriate policies for its successful performance within the World Trade Organization. Against this background, the experience and performance of the fourteen post-Soviet countries have been analyzed for the period from 1998 until 2017. The aim of this paper was to analyze the impact of WTO membership on economic growth, where Gross Domestic Product has been considered as an indicator of economic growth. Multiple regression analyses have been employed as a tool for the assessment of the WTO effect on GDP. In this paper we find a statistically significant, positive impact of WTO

membership on GDP growth, served at 0.05 significance level. Furthermore, it has been observed, that WTO membership will be fruitful for Uzbekistan if it is followed by a significant foreign trade turnover, high volume of oil production, developed infrastructure and stable low inflation rate. In this regard, accession to the World Trade Organization should be considered as a prerequisite for the Republic of Uzbekistan in its aim of enhancing economic growth.

Keywords: World Trade Organization, economic growth, GDP, former Soviet Union countries, multilateral trade

Student ID: 2018 – 29448

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Chapter 1. Introduction

1. Background

The issues revolving around economic growth has remained for a long time, a subject of study for economic science. The most influential studies of political economy, and later economic theory, paid great attention to the issues of economic growth, since economic development is likely to improve the prosperity of billions of people. However, we often ask the following questions: What really fosters the economic growth? Why are some countries showing faster and more sustained growth, while others are experiencing either a decline in economic development or an unchanged economic growth? Many researchers, economists and Nobel Prize winners have attempted to answer these questions in their theories, but failed to present any unequivocal view of what is actually a certain driver of economic growth.

In the context of globalization, despite the increasing differentiation of international economic relations, international trade has remained their predominant form. Despite the fact that the impact of foreign trade on the economic growth of national economies is significantly increasing, the mechanism of this influence in the group of countries of the world economy is quite contradictory.

The World Trade Organization (WTO) currently serves as an instrument to regulate international trade economic relations, comprising 164 member-

countries and as a predecessor of GATT, pursuing following goals: 1) Oversee the implementation, administration, and operation of the covered agreements; 2) Provide a forum for negotiations and settling disputes; 3) Review and propagate national trade policies; 4) Ensure the coherence and transparency of trade policies through surveillance in global economic policy-making; 5) Assist developing, least-developed, and low-income countries in transition to adjust to WTO rules and disciplines through technical cooperation and training; 6) Regularly assess the global trade picture in its annual publications and research reports; 7) Cooperate closely with the IMF and the World Bank[1]. Many scholars from the field of political science, economics, and law have chronicled the accomplishments of the organization and pointed to the WTO as an example of how IOs can foster meaningful multilateral cooperation and effectively enforce global rules[2]. An indicator for the success of the GAAT and subsequently WTO is the fact that global trade grew by more than 6 percent annually between 1950 and 2005 for which GATT/WTO is perceived as a major engine of this trade expansion[3].

According to Pomfret (2010) each economic system goes through stages of formation and development, a mature state and decadence when a new system is emerging. Since the late 1980s, in the socialist countries, a transition to radical restructuring of the relations inherent in former type of economy was

[1] http://www.assignmentpoint.com/business/international-business/world-trade-organization-wto.html
[2] See, for example, Bagwell and Staiger 2002; Barton et al. 2006; Jackson 1997; and Krueger 1998
[3] WTO 2007, 243.

designated. The economic system prevailing in the USSR was distinguished by a series of persistent signs from all former and current existing systems in the world. The fall of the Berlin Wall in 1989 has led to a rapid demise of the Soviet system of central planning and the launch of a relatively rapid transformation of the Soviet bloc economies into one that would be based on free prices and newly created markets. Yet, while all the former Soviet bloc countries suffered an unprecedented decline in output at the start of the transition, their subsequent economic performance diverged considerably (Svejnar, 2002).

Since the collapse of the USSR, there had been fundamental changes in its former territories related to the process of establishing and implementing the national interests of the post-Soviet states. Consequently, against the background of these negative trends in the territory of the former USSR space, new mutually acceptable forms of integration processes are being sought with a purpose of establishing and developing mutually beneficial economic cooperation. While the Baltic states of Latvia, Lithuania and Estonia have taken a course of integration into the world of the West, the other sovereign states as Russia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Armenia, Azerbaijan and Uzbekistan joined the Commonwealth of Independent States, which Georgia and Ukraine left in 2009 and 2018 respectively while Turkmenistan remained an associate member.

Accession to the WTO has been determined by the strategic course of modern trade policy of some of the former Soviet Union countries, which is aimed at integration of the state into the world modern economy and equal participation

in international open trade. Striving for the high pace of economic development, many countries considered the accession to the WTO as an instrument to influence the growth of the trade turnover between countries and, subsequently, economic recovery.

In 2017, taking a course to liberalization of foreign economic activity, Uzbekistan, following this tendency, resumed its accession to the WTO, marking this decision as one of the priorities for the development of foreign trade of the state. This issue is considered as one of the key factors to improve the country's international image and help further development of the countries, as well as being a conductor for mitigating the possible trade disputes, what is one of the main assignments of the WTO.

It is important to note, that the accession to the World Trade Organization is very long, costly and a complicated process. It demands accession negotiations with the WTO members with an outcome of full participation in the system of the world trade, realization of advantages of the international labor division and cooperation, as well as enhancement of economic cooperation of Uzbekistan with other countries. The process presupposes tariff changes and instruments of trade regulation, competent and timely policy of support of domestic manufacturer, including regulation of agricultural industry. Despite these difficulties, it is undoubted that, joining WTO, the Republic of Uzbekistan hopes to get a certain set of advantages of membership in this global world trade body. Allee and Scalera (2012) believe that the more severe a state joins an international organization, the more policy changes are needed, and the greater

the benefits it will receive from the membership in the organization. Nonetheless, there are also certain fears to consider: as accession to the WTO will influence domestic market of goods and services, it will have an immense impact on the balance of payment and the overall economy of the country. Balzhigit and Jun (2018) argue that states with low and middle income are not benefiting from the WTO, compared to states with a high level of income. According to them, the WTO is intended for doing business for net-exporters countries. Some scholars assume that countries which can mainly offer the world with only raw materials without having compatible brands, technologies and products yet, may not have the same benefits from accession; while others consider the membership in WTO as a pillar of economic long-run growth through the increased volume of foreign trade turnover (Winters, 2002).

Furthermore, the evaluation of relevant experience of former Soviet Union countries accessed the WTO knowing that the assessment of prospects of development of mutual economic and trade relations is of a great importance for Uzbekistan. Uzbekistan aims integration into the world trading system, for which purpose had undertaken the necessary measures. Signifying the beginning of the official negotiation process of Uzbekistan's accession to the WTO, the government has already implemented a number of large-scale economic and institutional reforms, such as liberalization of the foreign exchange market, tax reforms, a significant increase in the quality and accessibility of economic statistics, etc. To date, the government of Uzbekistan has already prepared and submitted the Memorandum on Foreign Trade

Regime, continuing to work on bringing the legal acts in line with the norms and rules of agreements of the organization.[4]

The experience of other countries of the former Soviet Union helps to avoid mistakes in harmonizing terms and conditions of the WTO membership, in addition to the enforcement of the norms and rules of the organization. According to the experts of EDB, the countries of the former Soviet Union have a key feature existence of the created structure of economy, which is not only a heritage of the USSR, but also result of development in the last 20 years. Harnessing of the available economic potential of the former Soviet Union is a key aspect of long-term economic policy[5].

History of WTO creation

The idea of creating an international organization to regulate international trade arose before the end of World War II. Mainly through the efforts of the United States and the United Kingdom, the International Monetary Fund and the International Bank for Reconstruction and Development were founded at a conference in Bretton Woods in 1944.

The third pillar of the new economic order, along with the above-mentioned organizations, was the establishment of the International Trade Organization (ITO). To this end, an international conference on trade and employment was held in Havana in 1946, the purpose of which was to develop a substantive

[4] https://mfa.uz/ru/press/news/2019/07/20150/
[5] https://mpra.ub.uni-muenchen.de/82051/2/MPRA_paper_82051.pdf

framework for an international agreement on tariff reduction, to propose to the countries concerned the charter of the organization.

As early as October 1947, the General Agreement on Tariffs and Trade (GATT) was signed and was initially considered only as a part of a comprehensive agreement under the new international trade organization. This agreement, seen as provisional, entered into force on 1 January 1948.

The main goal of GATT is to reduce barriers in international trade. This was achieved by lowering tariff barriers, quantitative restrictions (import quota) and trade subsidies through various supplementary agreements.

In order to reduce direct customs duties and hidden, so-called non-tariff, restrictions on the import of products from abroad, rounds of negotiations between the participating countries were regularly held within the framework of GATT.

The so-called Uruguay Round, which lasted from 1986 to 1994, was the most successful. As a result of the long negotiations, an agreement on the establishment of the WTO was signed in Marrakesh in 1994 and entered into force on 1 January 1995.

Participating countries agreed that the organization would not only regulate trade in goods (Which has been the subject of GATT since 1948), but also because of the increasing role of services in post-industrial society and their growing share in world trade, The General Agreement on Trade in Services

(GATS) -which regulates this area of foreign trade- was adopted (at the beginning of the twenty-first century - around 20%). In addition, within the framework of the Marrakesh Agreement, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was adopted, which regulates trade issues of intellectual property rights and is an integral part of the WTO legal framework.

The World Trade Organization (WTO) is an international organization established on the 1st January 1995 to liberalize international trade and regulate the trade and political relations of member States.

WTO is responsible for the development and implementation of new trade agreements, as well as for ensuring that members comply with all agreements signed by most countries of the world and ratified by their parliaments. Additionally, it operates on the basis of decisions taken in 1986 - 1994 under the Uruguay Round and earlier GATT agreements. Discussions and decisions on global liberalization issues and prospects for further development of world trade are taking place within the framework of multilateral trade negotiations (rounds). To date, 8 rounds of such negotiations have been held, including Uruguay, whereas the ninth in Doha, Qatar, started in 2001.

The objective of WTO is not to achieve certain goals or results, but to establish common principles for international trade.

Uzbekistan and WTO- beginning of the process.

The history of relations between Uzbekistan and the World Trade Organization dates back to 1994, when Uzbekistan obtained observer status in the WTO, and to September 1998 where the Memorandum on the Foreign Trade Regime of the Country was officially submitted.

There has been a certain work on accession to WTO: The Inter-Ministerial Commission on WTO and working groups in ministries and departments have been established; working materials related to WTO accession have been prepared; particular efforts have been made in order to improve the legislative framework in accordance with WTO rules and regulations. However, after a number of meetings and consultations held since 2006, the intensity of negotiations with the WTO, at the initiative of Uzbekistan, has steadily decreased. The activity of the working group itself and the discussions on the country's accession almost ceased by 2009. Implicitly, but quite unambiguously in Uzbekistan, it was concluded that the country would not force the process of accession to the WTO. According to the expert B. Ergashev there were several reasons for this[6]:

1. **Political factor.** Based on the specifics of the economic model of reforms focused on import substitution, public investment in strategic industries, protection/growth of national producers it was required strict customs and tariff regulation. In this regard, Uzbekistan, being at this stage,

[6] https://www.uz24.uz/ru/opinions/uzbekistan-i-vto--trudniy-dialog

was not ready to liberalize the foreign trade regime and to open its market for the import of foreign products. On top of that, Uzbekistan's policy anticipated a withdrawal from participation in multilateral integration associations, involving the transfer of sovereign authority to supranational bodies and the importance of coherence their economic policies (customs-tariff, currency regulation, etc.) with external players (WTO), based on the practice of bilateral agreements.

2. **Economic factor.** In the process of preparing documents to launch consultations with WTO member states, the short-term effects of the country's accession to the WTO on key macro-indicators have been assessed, considering different scenarios for reducing customs duties in the sectors competing in imports of industries. Evaluating the possible negative effects of a decline in GDP and an increase in the balance-of-payments deficit, it was clear that this could greatly complicate the economic situation in the country. In addition, at the time of submission of the application Uzbekistan has taken the benchmark for accelerated industrialization, which began in the mid-2000s. These are the industries of automotive industry, microelectronics, household appliances, machine tools and pharmaceutical industries. The idea of an agreement creation on preferential tariffs for products that should have only appeared seemed to be nonsense and therefore negotiations with the WTO gradually began to be suspended.

2. Purpose and Research Question

The main objective of this paper is to estimate the impact of the WTO membership on the economic growth of the fourteen former Soviet Republics from 1998-2017 and their economic performance in pre- and post-accession periods. The obtained results from quantitative analysis of overall impact can be further applied to the evaluation of consequences in terms of balance of costs and benefits from the possible membership of Uzbekistan in the World Trade Organization. The study is based on the macroeconomic data set of a nineteen years period, which will help to estimate the relationship between the multilateral trade in the context of WTO and economic growth (GDP). The linear multiple regression is used for measurement the impact of WTO for indicated period of time.

With this in mind, the research question in this thesis has been formulated as:

To what extent does the membership in the World Trade Organization lead to economic growth of the country?

This paper is organized as follows: The first section gives a brief overview of the topic, covering the concept of the importance of economic growth in the states and their global integration into international trade while focusing on the World Trade Organization in particular. Additionally, the background information on Uzbekistan's initiative of accession to the WTO is presented in brief. In the second section, a selected review of the economic literature on the drivers of economic growth is discussed. This is followed by the discourse of

the importance of international trade and WTO membership in economic performance. In the meanwhile, statistical model is presented in the third section along with methodology. In the fourth section, the results extracted from the linear regression analysis are presented. The fifth section gives the conclusion. The sixth section falls for the limitations of the conducted research and some recommendations are given for future studies. Finally, the last section is devoted to literature and sources utilized for this paper.

Chapter 2. Theoretical Background and Literature Review

2.1. Economic growth, economic development and it's measurement

Economic growth – a steady increase in production and consumption year after year in the leading countries of the world has proved to be one of the most stable phenomena of the last centuries and the subject of economist's constant interest. The problem of economic growth in the world remains relevant to this day. At the time Adam Smith laid many of the foundations of modern economics, there were most likely small differences between the richest and the poorest nations in the world (e.g. Maddison, 2001; Acemoglu, Johnson and Robinson, 2002). Since then, the gaps between the rich and poor have increased to a level that would have been incomprehensible to most 18th and 19th century economists. At the root of this great disparity is the differential growth experience around the world, some countries around the world have rapidly grown during the 19th and early 20th centuries, while a multitude of others have stagnated (Acemoglu, 2012). This differential growth led to a huge gap in living standards and income per capita which continues to this day. In other words, the consequences of a few percent change in the growth rate of a nation can have huge repercussions for the well-being and living standards of its citizens; and this, in just one or two generations (Galor, 2005).

A considerable amount of studies on economic development and economic growth has increased recently, and a number of studies attempted to advocate the idea that economic growth is what helps the achievement of economy's main objectives; this includes increasing the average per capita income of citizens.

Today, however, there is a significant differentiation of views on the identity of economic development and growth (Balcerowicz, 2013). In the works of one group of authors, there is a point of view that these concepts are synonymous. Another group advocates a complete opposite opinion. Individual scholars express views that differ from those of both groups. Orwell (2012), for example, suggested that economic development is a special type of economic growth: "in its essence, socio-economic development is such economic growth, which ensures the development of the person himself, his potential" (Orwell, 2012). At the same time, all authors join opinions on the important role of the study of economic growth as "the goal and criterion of creating a material basis for prosperity of social and economic society" (Feldman, 2014; Piketty and Saez, 2001; Phelps 2013). Despite all of that, a number of scientists emphasize that economic growth does not solve a number of social problems (Plekhanova, Ivanov, Ivanova, Kolesov, 2014).

Currently there is a vast amount of definitions of economic development. Joseph Schumpeter's interpretation can be considered as the basic one; in fact, he considers the development of the national economy "as a discrete movement from one round to another, spontaneously generated by the economy itself; Or

changing the trajectory along which the round-robin is rotated" (Schumpeter, 1934).

Goryunova (2013) under economic development means "a set of changes by means of which the economic system moves from a state of universal dissatisfaction to new, more favorable material and spiritual conditions of life".

The analysis of this concept from a systemic and self-organizational point of view is a "profound qualitative change in its structure and functioning." From the results of the synthesis of these interpretations it can be concluded that economic development is always a process, and, accordingly, indicators of economic development are always considered to be indicators of change of the state for a certain economic system over a certain period.

The concept of economic growth is interpreted differently by many scientists. On the one hand, economic growth is defined as the process of creating real GDP growth in any large and super-large economic systems (Saliychuk, 2008), on the other hand, as "quantitative and qualitative improvement of the social product over a certain period of time" (Andreeva and Sukhova, 2011).

Economic growth by a multitude of authors means "the change in the volume of production of material and intangible goods in the country, which expresses quantitative changes in the composition of the economy and the relationship in it, as well as the result of this process," respectively. According to Balcerowicz (2001), the concept of "development of the national economy" reflects qualitative changes of the national economy, and the concept of "economic

growth - quantitative." At the same time, some economists have pointed to the need to introduce the concept of qualitative economic growth (Harrod, 1942), which may contradict the earlier view that economic growth and economic development are two sides of the same coin.

There is an understanding of economic development as an increase in the rate of economic growth (Kremer and Chen, 2002), while economic growth "is a synthetic category reflecting socio-economic development" (Klasen, 2003).

Samimi and Jenatabadi (2014) believe that economic growth is "an increase in the volume of goods and services created over a certain period". In Dreher's (2005) interpretation, it is defined "as an increase in real GNP or CNP or an increase in real GNP or CNP per capita over a period of time". Warner (2003) by this term means "quantitative change in the production system of the country (industry, enterprise), expressed in the increase of GDP (GNP) or net product (gross income) in the enterprise". Androsov and Golovin (2010) understand by economic growth, an increase of GNP over a certain period of time.

Solt (2009) approaches the interpretation of this concept in a different way: "Economic growth is the standard of our lives, our well-being, our life expectancy, quality of education, health care and nutrition, diversity of our activities and our opportunities".

Ilyicheva (2002) believes that economic growth is "the accumulation of national aggregate capital through the use of material sources of growth, ensuring the consistent reproduction of material and intangible sources of

growth, material and intangible goods and services in order to meet the quantity of personal and social needs at a higher, qualitative level".

Nekozyreva (2008) defines this process as a long-term increase in the productive capacity of the country, based on technical progress, on the instrumental and ideological adaptation, which is necessary to provide the population with a growing variety of material benefits. She also suggests the opposite direction of economic development and growth, i.e. the antagonistic nature of these processes.

Goryunova (2013) expresses a slightly different view, she emphasizes the existence of two macroeconomic situations - the situation of "growth without development" and "development without growth," defining GDP as the main indicator of economic growth, and as the main indicator of economic development - the standard of living of the population.

The most common definition is that “economic growth is the growth (increase) of real GDP over a rather long period of time”. Today, GDP is a synonymous with economic growth and development for many policymakers and economists, who define a further vector of economic development based on the indicators obtained (Samuelson and Nordhaus, 2000). It is assumed that the greater the GDP of a country, the greater the citizen’s standard of living and welfare.

There are two types of understanding of the process: in a narrow sense, the term studied is portrayed as the growth of the main indicators of final output (GDP,

national income or per capita consumption). Broadly speaking - as a process of change in social institutions, which cause a transition from one stage of growth to another (Akilova, 2011).

Along with this opinion, a considerable number of scholars are criticizing the concept of GDP being a magnitude of economic growth (Cobb et al., 1995; Wilkinson and Pickett, 2009; Anheir and Stares, 2002; Kubiszewski et al., 2013; Bernasek, 2006). As a matter of a fact, they believe that GDP measures only monetary transactions related to the production of goods and series. It is based on an incomplete picture of the system within which the human economy operates. They also emphasize the idea that a more complete picture can be reflected based on how the human economic system fits the social and environmental systems and requires a number of other indicators. They advocate that by measuring only marketed economic activity, GDP ignores changes in natural, social, and human components of community capital on which the community relies for continued existence and well-being.

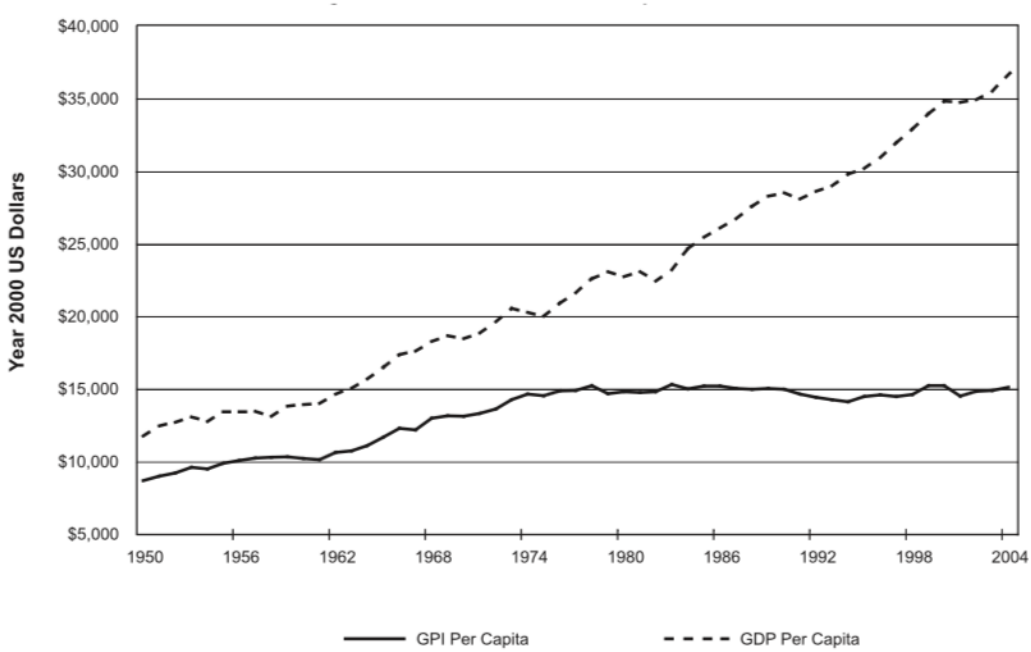
2.2. Measurement beyond GDP

A number of ways of measuring national-level progress have been proposed, developed and used to address this growing realization that GDP is a measure of economic quantity, not economic quality or welfare.

2.2.1. Genuine Progress Index (GPI)

In order to be able to reflect the well-being of the population and to measure national development, taking into account the contribution of non-market economic activities, such as domestic (free) services; increased external debt; the decline in well-being as a result of increasing income differentiation; pollution and environmental destruction (ozone depletion, marshland loss, noise pollution, etc.), specialists of the American research organization "Redefining Progress" in the 1990s developed, in particular, methodological bases of Genuine Progress Index (GPI), which includes a number of variables related to the social, economic, environmental and other parameters not included in GDP. This follows the Index of Sustainable Economic Welfare developed by Daly and Cobb (1989). "Both the GPI and ISEW use the same personal consumption data as GDP but make deductions to account for income inequality and costs of crime, environmental degradation, and loss of leisure and additions to account for the services from consumer durables and public infrastructure as well as the benefits of volunteering and housework. By differentiating between economic activity that diminishes both natural and social capital and activity that enhances such capital, the GPI and its variants are designed to measure sustainable economic welfare rather than economic activity alone" (Talberth, Cobb et al. 2007, emphasis added).

Figure 1. Real GDP and GPI Per Capita 1950-2004 in USA



Source: Talberth, Cobb, et al. 2007

Figure 1 pictures GDP and GPI trend in the US from 1950 to 2004 and shows that GDP growth does not imply GPI growth since 1970 when we look at environmental degradation, income inequality, and reduction of US hegemony in International Arena.

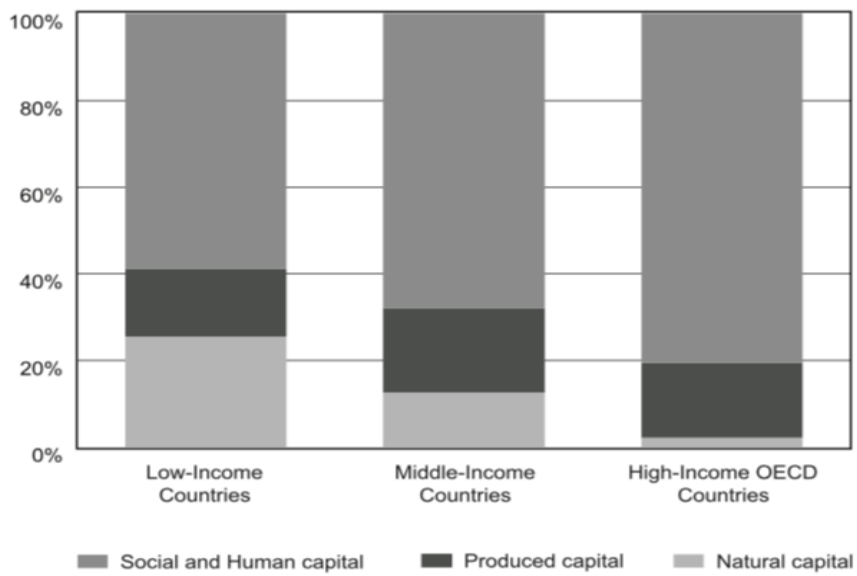
However, several authors have expressed doubts about the reliability of GPI (Brennan, 2008; Neumayer, 2010). They argue that the GPI uses inappropriate valuation methods for estimation and that human-made capital and natural capital are substitutes. Furthermore, scholars believe that the index includes

some important welfare-related items but overlooks others, such as benefits of political freedom and that it lacks a solid theoretical basis.

2.2.2. Genuine Savings (GS)

According to Hamilton et al. (2006), Genuine Saving is "the true level of savings in a country after depreciation of produced capital; investments in human capital (measured by education expenditures); depletion of minerals, energy, and forests, and damages from local and global air pollutants are taken into account".

Figure 2: Percent of Wealth



Source: Hamilton, Ruta et al. 2006

In the World Bank report, where the Wealth of Nations (2006) tells that increase of wealth in a country comes basically from increase of intangible wealth such as human capital and institutions. From that perspective, discrepancy between

high income countries and other countries is explained because poor countries rely more on natural capital first while rich countries invest in intangible wealth first. This is the sense of Figure 2 which leads to the conclusion that increasing of economic activity due to natural resources results most of the time in lower welfare in a long-term run.

2.2.3. Human Development Index (HDI)

One of the criticisms of using GDP as a measure of development is that it does not take account the various forms of social inequality. Following Amartya Sen's (Sen, 1981, 1992) capability theory, the Human Development Index (HDI) was developed in order to capture the social dimension of development to verify how economic growth and development is affecting individual wealth in national situations. The index measures the different dimensions of human development – "longevity, knowledge, and decent living standards". Longevity is gauged through life expectancy at birth, knowledge through literacy rate and years of schooling, and standard of living through GDP adjusted to purchasing power parity using a logarithm om real GDP per capita. While HDI is a step towards measuring development beyond national income, it has been criticized for not considering the environmental costs of progress (Hsu et al., 2013; Carmignani, 2013). The authors also recognized the difficulty of quantifying the resources needed for a proper standard of living, civil liberty, guaranteed human rights and personal dignity (UN Development Program, 1990). Further, the HDI is unable to account for the "relationship between consumption and well-being, employment and wages, technological advances and employment;

and inequality (Vergragt, 2012). Some limitations of the HDI are highlighted to explain the alleged side effects of progress (such as unemployment, crime, health needs, environmental pollution, family disruption, etc.).

2.2.4. Happy Planet Index (HPI)

According to Pigou's theorization, an income increase, or an improvement on monetary wealth, implies a proportional increase in people's happiness. This is nowadays the most common justification to the claim that GDP provides truthful indications of a community's happiness and well-being (Campus and Porcu, 2010).

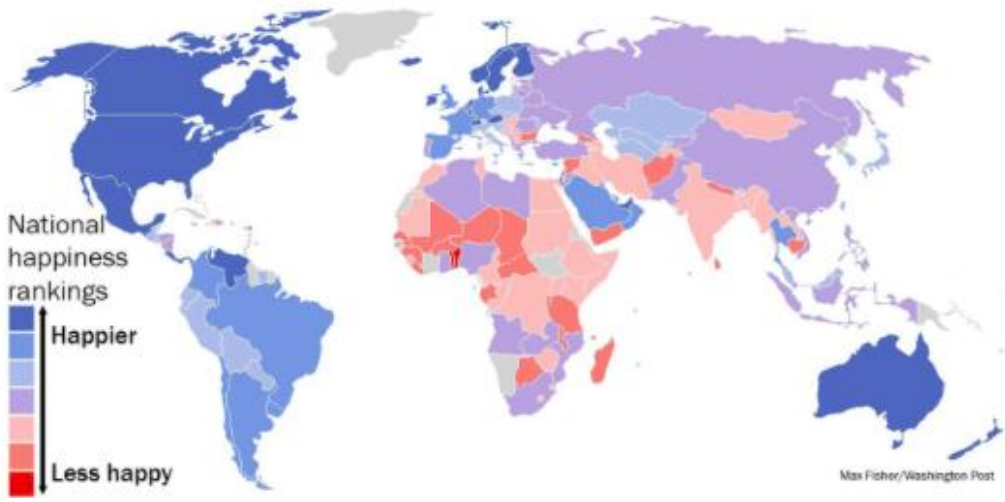
King Jigme Singye Wangchuk of Bhutan devised the concept of gross national happiness (GNH) as an official state philosophy in 1972. GNH asserts that people's happiness is more important than the percentage of gross domestic product (GDP). This philosophy has been subsequently observed by the international community.

In 2003, the first World Values Survey was conducted in 65 countries[7]. The result was quite unexpected. Nigeria, Mexico, Venezuela, El Salvador and Puerto Rico emerged as the happiest countries, followed by residents of Western Europe, the United States and Canada. Russia was among the unhappiest countries. In 2006, another international New Economist Foundation (NEF) introduced a metric - the International Happiness Index. The

[7] https://static1.squarespace.com

Happy Planet Index is an index of human well-being and the environment around the world. According to Selim (2008), it is inappropriate to compare countries using GDP, as most people aim to be happy and healthy than to be rich.

Figure 3. World Happiness Map



Source: https://www.washingtonpost.com

2.3. Determinants of economic growth

The identification of mechanisms that contribute to the accelerated development of some countries and hinder the growth of GDP of others became one of the main problems of economic science in the second half of the 20th century. This particular period contributed to the development of a vast number of theoretical approaches on economic growth, which provided the basis for numerous empirical studies. By analyzing the obtained results, a list of factors

influencing economic performance has been formed, such as economic factors, political determinants and socio-cultural and demographical factors.

2.3.1. Economic factors

There is a considerable amount of theoretical and empirical literature on the factors which affect economic growth. This section analyses two theories of economic growth, namely the theoretical perspective and the determinants of economic performance.

The neoclassical growth theory of Ramsey (1928) and Solow (1956) made three important claims with regard to economic growth. First, an increase in the capital-to-labor ratio (investment and savings) can stimulate economic growth. Second, economic growth will plateau unless technological improvements are made to enable the use of fewer resources in production. Third, economic convergence will be achieved as less advanced economies grow faster than more developed economies using the same amount of capital. These assertions are made on the assumption that there is "exogenous technological change, constant returns to scale, capital and labor substitutability, and diminishing marginal productivity of capital" (Romer, 1986).

The endogenous growth theories of Romer (1986; 1990) and Lucas (1988), on the other hand, suggest that introducing new accumulation factors such as knowledge and innovation will stimulate self-sustained economic growth, which can lead to varying growth patterns. The continuous or increasing returns to capital, as a result of the endogenous nature of production technology,

is an important element of this model. Further, this framework highlights three significant sources of growth: new knowledge (Romer, 1990; Grossman and Helpman, 1991), innovation (Aghion and Howitt, 1992), and public infrastructure (Barro, 1990). A number of studies have investigated the factors affecting economic performance using varying conceptual and methodological frameworks.

The relationship between trade and economic growth has received a great deal of attention during the last three decades. However, the evidence from this literature is mixed and conflicting across methodologies and countries. The studies of Dufrenot, Mignon, and Tsangarides (2010), Chang et al. (2009), Rassekh (2007), Kim, Lin and Suen (2011), Dollar and Kraay (2004), Frankel and Romer (1999) and others confirm the positive impact of trade on economic growth. For example, Dufrenot, Mignon, and Tsangarides (2010) apply the quantile regression approach to determine the effect of trade openness on economic growth for 75 countries. Their findings advocate the impact of openness on higher economic growth for low-growth countries in comparison to high-growth countries. Kim, Lin and Suen (2011) explored that trade openness has positive effects on financial development, capital accumulation and economic development in high-income countries, whereas in low-income countries the result is negative and significant. Furthermore, Chang et. al (2009) observed that trade had a positive relationship with economic growth in the 82 countries he examined. Similarly, Rassekh (2007) noted that lower-income

countries benefitted more from international trade than higher income economies.

Moreover, the analysis of the impact of transport infrastructure development on the economic growth of countries and regions has been widely disseminated in a number of economic empirical studies. Munnel (1990) believed that the development of transport infrastructure promoted private investment inflow. In addition, Canning and Pedroni (2008) emphasized the relationship between economic growth and developed infrastructure through better accessibility and lower transportation costs, what eventually facilitates trade and lower commodity prices, thus maximizing their comparative advantage. Economists believe that rail transport is thus a crucial pillar in the chain of world economic ties, serving as the prerequisites for achieving high and sustainable rates of economic growth.

Oil production can play an important role for accelerating economic growth of the state. Several researchers have explored a relationship between oil production and economic growth in former Soviet Union countries (Reynolds and Kolodziej, 2008), Central and Eastern Europe (Brunnschweiler, 2009), Nigeria (Akinlo, 2012), Saudi Arabia (Alkhathlan, 2013) and Eurasian countries (Bildirici and Kayikci, 2013). The studies showed that oil production had a positive effect and a unidirectional or bidirectional causal relationship with economic growth.

Theoretical frameworks explaining the relationship between inflation and economic growth remains contentious. Mundell (1963) and Tobin (1965) suggested that inflation has a positive relationship with economic growth, given that inflation can be substituted with investments and real money. In contrast, Stockman (1981) proved that inflation resulted to adverse economic impact when investment and real money balance were assumed as complements. Meanwhile, Sidrauski (1967) advocated a neutral relationship between inflation and economic growth, assuming that the rate of money supply does not impact economic output or structure. Guru (2016) deemed inflation as important in the growth of developing countries. Fischer (1993) advocates negative correlation between inflation and economic growth stating that inflation hampers economic growth through investment and rate of growth productivity. Barro (1995) by examining panel data from 1960 to 1990 for 100 countries have found negative and statistically significant effect of inflation on economic growth. According to scholar, investment is the main channel through which inflation reduces economic growth. Ghosh and Phillips (1998) prove a statistically significant negative relationship between inflation and economic growth by analyzing 145 countries. In addition, they believe that positive relationship between the two variables was detected when inflation rate is ranged between 2-3 percent or below.

Among the factors that significantly affect economic growth, intensity of structural changes, investment attractiveness of the country, standard of living of the population and other parameters of economic and social development,

the level of real exchange rate is regularly mentioned. Currently there is a relatively broad spectrum of literature suggesting a correlation between the real exchange rate and GDP growth. According to the traditional approach model, depreciation has a beneficial effect on economic growth[8]. Currency devaluation makes local goods cheaper abroad, thus increasing demand for them, which in turn is reflected in an increase in exports, which are part of GDP. In contrast to the traditional approach, the structural approach of linking economic growth lies in the fact that currency depreciation can have a deterrent effect on output and employment, especially for less economically advanced economies. Currently, there is a relatively broad spectrum of literature suggesting a correlation between the real exchange rate and GDP growth. For example, D. Rodrik (2007) proves that a high real exchange rate stimulates economic growth. This is particularly the case for developing countries, assuming that traded goods suffer distortions that keep poor countries from converging. He believes that "as overvaluation hurts growth, so undervaluation facilitates it", associating it with acceleration of rapid growth in most of the countries. In turn, Calvo and Reinhart (2000), after analyzing the effects of 96 devaluation cases, concluded that a weak currency affected economic growth more often negatively than positively, especially in low- and middle-income countries. In addition, MacDonald (2000) identifies the fundamental characteristics of flexible exchange rates in his article. One of the principal features of such rates

[8] These approaches are the Keynesian approaches (consisting of the elasticity-cum-multiplies approach and policy approach) and the absorption and monetary approaches

is the fact that they have high volatility, which can affect economic growth through channels such as trade and investment.

Foreign Direct Investment (FDI) has recently played a crucial role in internationalizing economic activity and its primary source of technology transfer and economic growth. Investment is the most fundamental determinant of economic growth identified by both neoclassical and endogenous growth theories. Furthermore, the importance of this factor on economic growth has led to a number of empirical studies. For example, De Gregorio (1992), Zhang (2001), Hermes and Lensink (2000), Borensztein et al. (1998), Blomstrom et al. (2000) and others affirm a significant nexus FDI-economic growth. Durham (2004) advocates that developing and developed countries respond differently to FDI in growth perspective. Thus, several authors supporting this point of view believed that the effect of FDI is dependent on the presence of other factors. For instance, Borensztein et al. (1998) and Blomstrom et al. (2000) highlighted the importance of human capital to address technology gaps. Balasubramanyam et al., (1996) noted that open-trade and investment regime, as well as, macroeconomic stability is important for countries to benefit from FDI. In addition, Alfaro et al (2004) found that a developed financial market contributes to the level by which FDI affects economic growth. In addition, a number of studies also argue that FDI facilitates domestic investment, while Easterly (1993) believed that preferential tax treatments and other concessions can have negative effects on domestic incentives. As such, it appears that FDIs have different effects on emerging markets as poorer countries may not have

the necessary initial absorptive attributes. The expected benefits from economic integration i.e. free trade, customs union, common market, economic and political union led to the formation of regional economic communities (Schiff and Winters, 2002). Daniels et al (2004) noted that most trade groups are comprised of countries in the same geographical area due to shorter distance for traveling goods, similar consumer tastes and preferences, and lower distribution costs. Among developing countries, the primary reasons for economic integration are trade, development, political, security (Pangetsu and Scollay, 2001).

Various researchers (Romer, 1990; Grossman and Helpman, 1991; Aghion and Howitt, 1992; Fakhfakh and Taymaz, 2001; Jones, 2002) have stressed the importance of innovation and research and development (R&D) in economic development. R&D leads to inventions and innovation which improves production processes and modernizes existing technologies (Blackburn, Huang and Pozzolo, 2000). Better processes and use of new technologies can result to increased productivity and growth. For instance, Kuo and Yang (2008) explored that R&D, investments and use of technology spurred China's economic growth. Chou (2002) examined contribution of research and development in Australian economy during the period 1960-2000 and concluded that 20-40% of growth was due to research intensity in Australia. As such, it is important for governments to develop policies supporting innovation and increase level of R&D investment.

Unemployment has been a continuous issue for years in a number of countries. Hassan and Nassar (2015) noted economic growth can be negatively affected by unemployment rate. Balan (2014) concluded that there is a statistically significant negative effect of unemployment on GDP and the effect of net average wage on youth unemployment is positive. Gil-Alana (2010) studied unemployment and GDP of USA, UK and Japan. It has been found that there is negative effect of unemployment on GDP in case of USA and UK and while in case of Japan it is not statistically significant. Anyanwu (2013) found that young people have less experience as compared to old people due to which it is very difficult to gain the employment; they have to bear less salary and wages for same work as compared to older/experienced people.

2.3.2. Political factors

Analyzing a country's economy should not be limited to considering only the market factors, but should also include examining technological changes and innovations, as well as, political conditions. Political factors result to differing interests and institutions, thus, it is important to understand how much and in what direction the regime type of government influences economic performance. One of the first studies attempted to establish the relationship between political factors and economic development was Martin Lipset in 1959, finding that countries with stable democracy are more developed (Lipset, 1959). However, several experts opined that democracy has a negative or no effect on GDP growth (Gerring, Bond, Barndt, Moreno, 2005). Furthermore, democracy had been associated with the right to vote (Cheung, 1998), with having

constitutional process, press freedom, clear and effective judiciary, transparency, openness, and citizen participation in decision-making (Rivera-Batiz, 2002).

With more than half a century ago, the dilemma was whether centralized economies or market economies are more efficient in terms of production of goods and services, capital investment and increased productivity in the long term and as therefore, in terms of the standard of living. The democratic government has been criticized by Walter Galenson and Karl De Schweinitz. In 1959, they argued that democracy is holding pressure on immediate consumption, which increases the investments cost, therefore slows down the growth. This argument was accepted and taken over by Samuel Huntington in 1968 and Dominguez in 1975. From this perspective, democracy is viewed as a factor which generates an explosion of demand for current consumption, demand that threatens profit, resulting in reduced investment and slowed down growth. Within this context the government must possess the ability to act as an "iron hand" to take drastic measures to increase the size of the investment and hence the resources used in this process (Huntington, 1968). It was also shown that the countries with an authoritarian government comparative with democratic countries are at the same rate, or even at a higher one predisposed to rapid economic growth. Additionally, Barro (1997) found a nonlinear positive relationship between political freedom and economic growth. This relationship was explained by showing that countries with low levels of

political rights have experienced higher growth when they moved to more democratic regime.

In addition, Heo and Tan (2001) examining 32 developing countries found that in 34% of countries economic growth stimulates the democracy, while in 31% of countries economic growth is driven by democracy.

Furthermore, Sumanjeet (2015) advocates that the lack of transparency hampers economic growth and that better institutional transparency leads to undermine economic growth.

It is therefore concluded, that the significance of the relationship between political factors and economic growth as well as development exists, but the effect of it varies upon the countries.

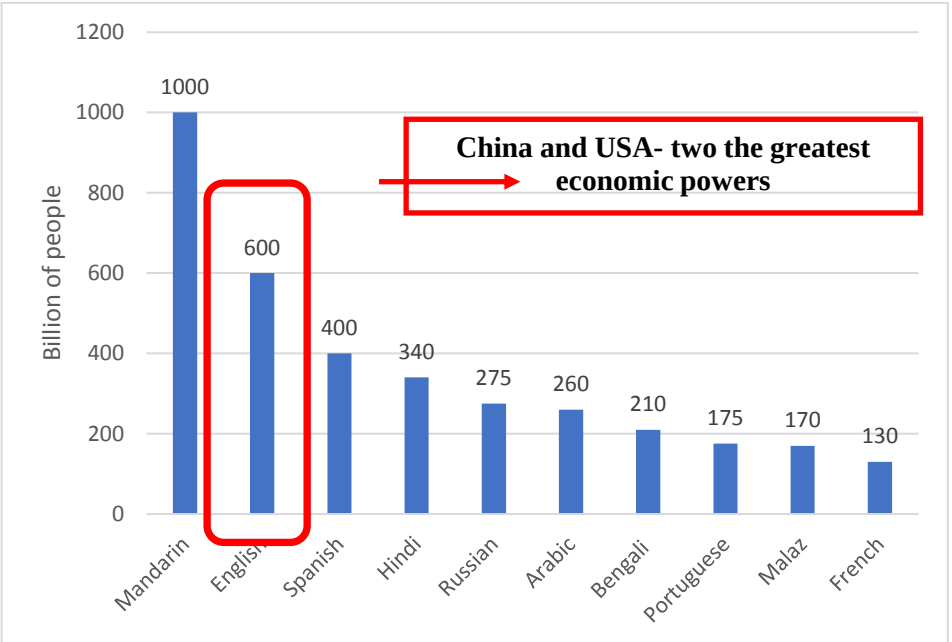
2.3.3. Socio-cultural factors

Sociocultural factors seen to influence economic outcomes. Social factors include consumption patterns, savings, investment systems, expectations, and behavior (Harrison and Huntington, 2000). Culture, meanwhile, refer to beliefs and values (i.e. preferences) transmitted from one generation to another through ethnic, religious, and social groups (Guiso et al. 2004). Birdsall's (2001) study on the relationship between religion and preference for savings showed that religious people are more likely to teach their children to save than non-Christians. In addition, he suggested that having a common religion influences economic performance.

However, none of those has been able to become a universal language. With the aim of making international communication simpler, numerous efforts have also been made to create artificial languages during the past centuries.

Cultural studies can focus on three main elements – ethnicity, language, and religion (Guo 2006). Ethnicity can reflect differences on how people behave, language is used as a tool of communication, and the religion can facilitate understanding of a culture's attributes. In addition, it was observed that the distribution of language speakers indicated how global economic power was allocated. For example, Latin used to be a universal language in Europe, French was known to be language of diplomacy, and at present, English plays a big role in world trade. In the case of the Soviet Union, Russian used to be the major language in its member countries but as the Russian power declined, so has the use of the Russian language. Meanwhile, China's rise as an economic power has prompted some countries to teach and learn the Chinese language.

Figure 4: The most spoken languages in the world (2010)



Source: www.visionofhumanity.org

The graph above presents the most spoken languages in the world in 2010 and as stated above, it shows that the two most spoken languages are also the greatest economic powers in the world.

In addition, there is a large body of literature, that has revealed that one of the most important factors of economic growth is human capital (Riley, 2012; De la Fuente and Doménech, 2000, 2006) with regard to both the effect of level (so called level effect) by its decisive influence on production through labor productivity (Romer, 1990; Mankiw, Romer and Weil, 1992) and the rate effect by contributing to increased competitive advantage through innovation and diffusion technology (Pistorius, 2004). De la Fuente and Doménech (2000,

2006) studied the relationship between production and human capital, both in level and in first-order differences, observed a positive and significant statistical correlation (demonstrated by the Temple, 1999). Bassanini and Scarpetta (2001) revealed in a series of OECD data for the period 1971 to 1998 that increased duration of schooling by one year leads to an increase in GDP per capita by 6%. Benhabib and Spiegel (1994) have shown that the introduction of human capital as a factor of production by function type Cobb -Douglas leads to its insignificant effect on growth of GDP per capita, but if taken into account the influence of human capital on total factor productivity, the effects are visible in two aspects: a) human capital influences the internal rate of innovation as evidenced by Romer (1990); b) human capital influences the rate of diffusion of technology in the spirit demonstrated by Nelson and Phelps (1966). They show that an increase of 1% of the capital stock leads to a 0.13% increase in the rate of growth and the process of catching up technological development of other countries is strongly influenced by human capital stock nationwide as demonstrated by the Funke and Strulik (2000).

2.3.4. Demographic factors

There has been a long time since most of economists focused on population growth and population size to evaluate the effects of demography, which seem to be controversial. In the 1990s, Barro (1991, 1997) introduced a set of demographic variables into “convergence” models of economic growth. The model showed that, in general, fertility, population growth and mortality was

negatively related to per capita output growth, while population size and density had a positive relationship with per capita output growth.

Many analysts predict that high-income countries would have slower economic growth in the coming years due to slow population growth. From a theoretical perspective, Malthus (1993) posited a negative relationship between population growth and well-being. He believed that population growth tends to be faster than increases in food supply. As such, various population reduction strategies are needed in order to ensure that the number of people does not exceed the amount of available food. However, Boserup (1965) argued that population growth can spur technological innovations that would enable food production to meet the demand of the population. Simon (1990) stated that greater population growth would lead to greater "stock of useful knowledge" which can be utilized to improve economic condition.

Studies on the effect of population growth on economic growth in some countries have been contentious. Wesley and Peterson (2017) cited studies showing contradictory results with regard to population increase and per capita economic growth i.e. a positive impact was observed in India and Eastern and Southern Africa, while a negative relationship was observed in China and Australia. Huang and Xie (2013, as cited by Wesley and Peterson, 2017) observed that current population growth had a negative effect on economic growth. Meanwhile, lagged population growth had a positive effect on economic growth which, in effect, shows a lack of long-term relationship between these variables. The conflicting results from different researches imply

that the impact of population growth on per capita output growth varies based on a country's or area's situation.

2.4. WTO Membership and Economic Growth

Over the past decades, international trade has grown several times faster than world output. Thus, in the last decades of the 20th century, the average growth rate of international trade averaged 6%, which was twice higher than the growth rate of world production. During this period, more and more countries have sought to integrate into the international trading system and share the benefits it offers. This tendency towards unification is caused by the mutual advantage of international trade, which maximizes world production, ensures the international division of labour and increases social well-being. To date, countries are beginning to view multilateral trade agreements as the basis of their trade policies. Such agreements are an integral part of the overall development strategy of countries and regions for phased integration into the world economy. With regard to deepening international economic integration, it was important to pay attention to GATT's predecessor, the World Trade Organization, which, as an important institution, provided the institutional and legal framework for the development of international trade. This international organization currently includes most of the world's countries (164 States), where international trade is 96%. In the history of WTO/GATT, none of the member countries, including developing and least developed countries, has withdrawn, whereas some non-participating countries are interested in joining

as an observer country, what eventually demonstrates the smooth realization and achievement of national interests.

In general, the relationship between trade liberalization and economic growth has been discussed by a number of scholars, though the relationship between them is still considered as controversial. Some scholars have discovered that membership in GATT/WTO has a positive impact over international trade, which eventually promotes economic growth of a state (Kim, 2008; Konya, Matyas, and Harris, 2011; Grant and Boys, 2012). In addition, it is believed that countries with higher level of commitments towards trade liberalization benefit more from WTO membership (Allee and Scalera, 2012). Tang and Wei (2009) find that accession to the WTO tends to raise a developing country's income and increase its growth rate by about two percentage points for approximately five years if the country was subject to rigorous accession procedures[9]. Although the increase in growth rate fades after about five years, the developing economy is permanently about 20% larger as a result of WTO accession (Tang & Wei, 2009). Authors find a smaller and temporary increase in growth after application for WTO membership, and a separate larger increase after accession.

[9] Separating countries by the rigorousness of their accession process is a common practice in WTO accession literature because many developing countries acceded automatically and without extensive reforms due to their status as former colonies (GATT Article XXVI 5(c)). The automatic accession process retired with the GATT in 1995. Since the WTO no longer allows for automatic accession based on colonial status, only rigorous accession processes have been possible from 1995 onward. Therefore, rigorous acceders are the correct comparison group for today's developing countries considering WTO accession. (See, for example, Allee and Scalera (2012))

Even when controlling for the impact of WTO accession on trade as a percentage of GDP, they still find a separate statistically significant effect of WTO accession on growth. They also believe that political commitments under WTO accession are more efficient in countries with weak governance. This assumes that foreign policy commitments can function as a (partial) substitute for governance in advocating economic development (Tang & Wei, 2009). The authors acknowledged that their results may simply indicate a one-off increase in income levels over several years, rather than a steady increase in the country's economic growth rate, but their data does not have extensive periods to determine how long the effect lasts (Tang & Wei, 2009). Their econometric model encompassed 135 developing countries within the period of 1981-2003, except OPEC members and industrialized countries (Tang & Wei, 2009).

Previous studies of 112 countries from 1960 to 1998 conducted by Li and Wu (2004) argued that WTO accession tends to increase GDP growth rate by 1.6 percentage points in high-income countries. Their regression model does not reveal a statistically significant impact of WTO accession on growth rates in low-income countries. Their definitions of "high income" and "low income" presume whether the country had a per capita income of more than $3000 in 1987, which was the median year of their sample. Li and Wu also verify whether national institutions affect the benefits of WTO accession, and observe that civil law countries derive profit far more than continental law countries, while former socialist economies have limited accession benefits. It is important to note that their model does not capture the fact whether developing

countries have automatically joined as former colonies or undergone strict accession procedures as is now the case in WTO literature. Their model also uses older data and fewer countries than Tang and Veya's model in 2009.

Furthermore, Kim (2011) conducted a research studying the effect of trade liberalization over standard of living and long-run economic growth, where he found that "greater trade openness tends to have strongly beneficial effects on growth and the standard of living of developed countries". However, the effect turned out to be significantly negative on growth and real income of less developed countries.

Though the literature examining the effect of the particular relationship of WTO accession and economic growth is somewhat limited, the studies investigating the relationship between WTO accession and specific factors or components in the economy (e.g. trade, governance) are much more comprehensive. The following literature observes the studies, which can help to determine the impact of the WTO on economic factors, as these factors are consequently related to overall growth.

Larch et al. (2019) using the gravity model in their research by measuring the impact of GATT/WTO membership on trade flows observed this effect to be "large, positive and statistically significant". Authors believe that WTO membership increases trade between members by 171% and between member and non-member states by approximately 88%, being effective in promoting trade between non-members, rather than among members.

Edwards, 1990; Gastanaga, Nugent and Pahamova, 1998; Hausman and Fernandez-Arias, 2000 cited by Teh et al. (2016) advocate that the states, which reforming their trade regimes facilitating to openness are able to attract more FDI. Engman (2005) believes that the facilitated cross-border movement of goods will lead to increased FDI inflows and eventually, to higher economic growth. In addition, WTO (2015a) justify a positive and statistically significant relationship between trade facilitation and FDI inflow within conducted research of 141 states over the period from 2004 to 2013.

Also, empirical studies based on data from 106 countries, including 11 countries from the Middle East, North Africa, Afghanistan and Pakistan, as well as the Caucasus and Central Asia region, from 1980 to 2013 state that increased trade openness contributes to increased economic growth, leads to higher incomes, thus reducing poverty (IMF, World Bank, and WTO 2017) and reducing the country's wage gap (Council of Economic Advisors 2015). Similarly, trade has increased access to capital and technology, and, through increased productivity and growth, has led to improved living standards, including in emerging and developing countries (IMF, 2017).

While openness to trade serves as a prerequisite for faster economic growth, a number of publications help to understand why the relationship between trade and economic growth may be contradictory, and why some countries fail to use trade to achieve higher levels of per capita income. In some countries, development may fail because of so-called "poverty traps," when slow growth and poor initial conditions help each other to exist. For example, multilateral

trade may encourage countries to specialize in products such as primary commodities instead of final consumption goods, what limits productivity and growth gains (Young, 1991; Grossman and Helpman, 1991).

Moreover, new development of the theory of international trade shows that besides comparative advantage (according to which each country specializes in what it can do better, than others), the role of geography and investment streams is extremely important. According to these theories, various forces engage in complex interaction, defining the nature of agglomeration or dispersal of economic activity that leads to spatial inequality. On this basis some types of economic activity will be grouped in particular locations where there is "a critical mass" of infrastructure, the human capital, technological knowledge, etc. When the country is opened for world trade, at an initial stage there is a number of difficulties for attraction of these types of activity.

Finally, the country's economy may be influenced by distortions or interventions that make trade policy completely meaningless (Harrison et al., 2003). For example, the inflexibility of the labour market or the inefficient financial sector may impede the stabilization and redistribution of resources necessary for trade liberalization to accelerate growth. An unfavorable investment climate or distorted macroeconomic framework, leading to financial instability and even corruption, wars and political instability, discourage to invest in market-attractive activities. In such circumstances, trade policies are not effective in changing the incentive structure.

To sum up, with trade, economies are expected to grow faster, but in many cases other measures are needed to enable countries to take advantage of all the advantages and opportunities offered by an open economy. For example, it is essential that the country has a stable macroeconomic policy and a clear legislative framework to attract much-needed foreign investment. Or, as the experience of many countries where liberalization has been successful shows, a coherent package of policies is often needed to create a sufficient moment of "big push" in which industrialization and technological modernization become self-sustaining. Thus, multilateral trade through WTO mechanisms would yield the expected benefits of a positive impact on a country's economic growth.

Chapter 3. Methodology

This chapter includes: (1) research subject and research hypothesis (2) the conceptual framework which will shed light on the general overview of the logic and purpose of this paper; (3) the research design and hypothesis; (4) the data collection method; and (5) the type of analysis employed for conducting the research.

3.1. Research subject

The research question needs to be reviewed at this stage based on the above discussions, as well as to guide further methodological discourse and research. Having provided background information on Uzbekistan, the author of this thesis attempted to formulate the research question to make it as applicable to the case of Uzbekistan as possible. The general framework of the present research is the WTO accession, i.e. the discourse stayed within the framework of the Former Soviet Union countries' accession to the WTO. To further narrow the research area, the author looked at WTO accession from the angle of its economic benefits, i.e. whether countries are able to benefit economically from acceding to the WTO. More specifically, the performance of GDP rate as a result of countries' WTO accession during the period from 1998 to 2017 for further implications which can be applied to the Republic of Uzbekistan. The assessment of comparative analysis of the WTO membership effect on the economic prosperity of the countries will determine the most effective policy in the sphere of foreign trade for the Republic of Uzbekistan. As it was

mentioned above, in 2017 the Republic of Uzbekistan resumed the accession process to the World Trade Organization.

3.2. Hypothesis Development

As indicated previously, the range of countries which is going to be analyzed is narrowed down to the countries with common historical past, as well as stage of economic and political transformation - Former Soviet Union states, which are Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Ukraine, Uzbekistan. The hypothesis was formulated based on debates around international trade and WTO, whether the country is able to gain economic benefits from its WTO accession. Thus, the hypothesis is formulated as follows:

> **H_0: The accession in the WTO will not have a positive impact on the economic performance of a member country.**

3.3. Conceptual Framework

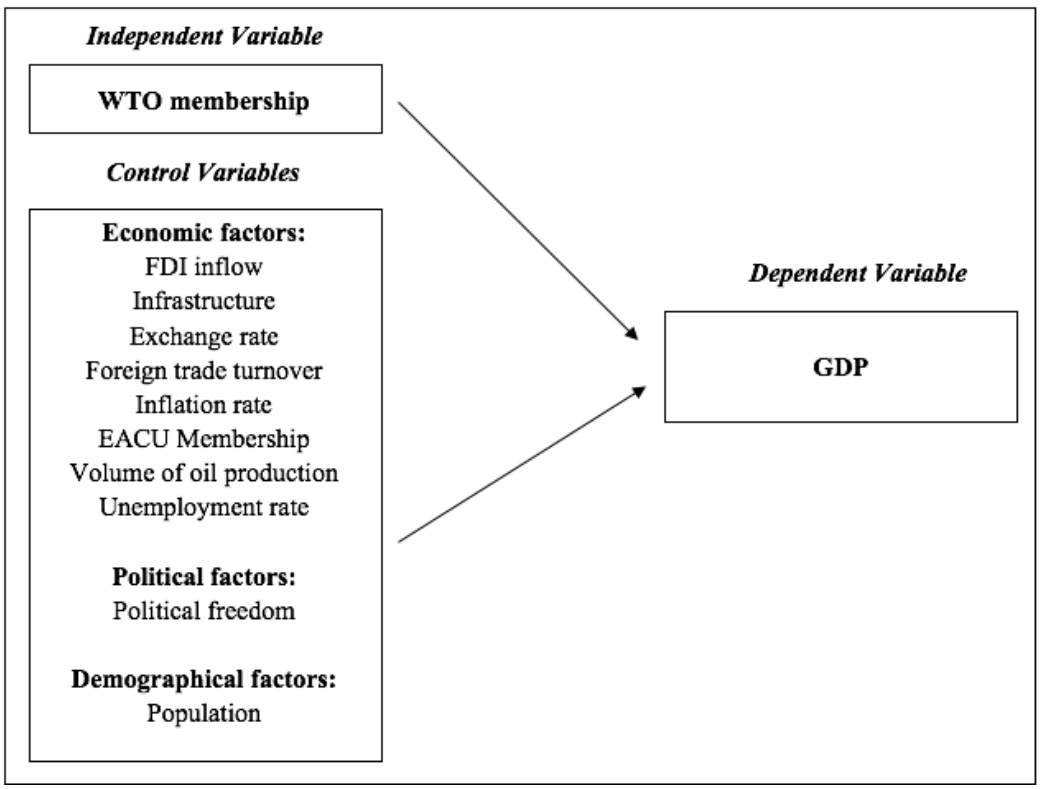
The study aims to examine the effect of WTO membership on economic performance of the former Soviet Union countries. Annual Gross Domestic Product (GDP) is employed as dependent variable which is hypothesized to be affected by WTO membership. This indicator has been selected due to availability of data for the selected period of time. In addition, based on previous researches (e.g. Chand, Tiwari and Phuyal, 2017), this indicator is

widely used and commonly recognized with agreed methodology of its calculation, depicting economic picture of the country.

As it was emphasized in the literature review, there is a number of factors affecting performance of a state, such as economic, political, socio-cultural, demographic and etc. In this study few particular independent variables representing each group of factors have been selected based on theoretical background and past empirical results. In this study, WTO Membership as independent variable was associated with some control variables in aim to figure out whether there are other factors a part from the independent variable which could explain change in GDP among post-Soviet Union countries. Control variables are: 1) Foreign Direct Investment inflow (FDI); 2) Inflation rate; 3) Unemployment rate; 4) Population; 5) Political freedom; 6) Foreign trade turnover; 7) Infrastructure (the length of rail ways); 8) Exchange rate; 9) Volume of oil production; 10) EACU membership (which is decoded as 1-member, 0-non-member). Author believes, that these variables will help to estimate the effect of WTO membership on GDP, and being more specific, how does the importance of these variables change in the pre- and post-accession period of WTO membership from the perspective of economic performance. In this regard, under the current study, we assume that through this causal relationship it will be possible to reveal to what extent this impact on GDP, which gauges the health of a country's economy, takes place in the case of Former Soviet Union countries for further implications for the Republic of Uzbekistan.

The figure 5 demonstrates the graphical order of the variables with the purpose of finding the causal relationship between them.

Figure 5: Conceptual Framework Table



3.4. Research Design

Panel study is a particular design of longitudinal study in which the unit of analysis is followed at specified intervals over a long a period, collecting repeated measures from the same sample at different points in time (Blossfeld, 2009). In this study the former Soviet Union countries were observed within twenty years (from 1998 to 2017) in order to assess the changes in the value of independent and dependent variables.

As it was mentioned above the former Soviet Union countries have been chosen as a sample of this research. The countries are: Azerbaijan, Armenia, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan. However, Turkmenistan has been excluded from the research study due to unavailability of data for particular indicators.

With 14 countries covering period of 1998 to 2017 of data, this study has a total of 280 observations.

3.5. Data Collection

The data for present research was extracted from the online statistical database sources. Data on WTO membership was provided by the official page of the World Trade Organization. The World Bank database provided numbers for such indicators as: FDI inflow, unemployment rate, population, foreign trade turnover, infrastructure (the length of the rail lines), exchange rate. The data on oil production was taken from UN data online source. The Freedom House online page provided with the data for the level of political freedom for each of the countries. And, finally, EACU membership data was provided by Wikipedia.org online source. The missing data for particular variables was taken from the statistical office of corresponding countries.

3.6. Data Analysis

For the assessment of the indicated hypothesis, a suitable methodology has been developed. The data analysis for 280 observations was measured through a Multiple Regression Analysis performed with the software SPSS. The Multiple Regression Analysis attempts to find out to what extent the independent variable has an impact on dependent variable (Pallant, 2005) with regard to control variables. The regression analysis has been implemented for the Post-Soviet Union countries in order to depict an overall picture: whether the accession process in the WTO has a significant impact of economic growth (GDP) in the countries of the Post-Soviet Union space. The regression analysis is one of the best techniques in estimating not only the impact, but also to show the correlation and direction, i.e. whether there is a positive or negative correlation from the accession process.

Below the equation of a multiple linear regression is indicated in order to evaluate the relationship between the dependent and independent variables.

$$GDP_n = \beta_0 + \beta_1 WTO\ Membership + \beta_2 FDI\ inflow + \beta_3 inflation + \beta_4 Unemployment + \beta_5 Population + \beta_6 Political\ Freedom + \beta_7 Foreign\ trade\ turnover + \beta_8 Infrastructure + \beta_9 Exchange\ rate + \beta_{10} Volume\ of\ oil\ production + \beta_{11} EACU\ Membership + \varepsilon$$

Chapter 4. Results and Discussion

This chapter will provide the implemented statistical results which have been measured against the established hypothesis.

Firstly, the regression analysis has been conducted only for dependent and independent variables, based on which we obtain the regression equation as follows:

Table 1. Regression analysis with dependent and independent variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.160[a]	.026	.022	1.63036

a. Predictors: (Constant), WTOMEMBERSHIP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.500	1	19.500	7.336	.007[b]
	Residual	738.943	278	2.658		
	Total	758.443	279			

a. Dependent Variable: GDP

b. Predictors: (Constant), WTOMEMBERSHIP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	24.015	.142		169.235	.000
	WTOMEMBERSHIP	-.529	.195	-.160	-2.709	.007

a. Dependent Variable: GDP

From the Model 1 summary we can see that R^2 equals to 2.6%, what means that the regression model explains only about 2.6% of all the variability in given dependent variable, so independent variable explains only a small portion of the

variation in the dependent variable well in spite of significant level of the WTO membership.

Secondly, the regression analysis, which included the control variables in order to measure the changes has been performed:

Table 2. Regression analysis with dependent and independent (control) variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.964[a]	.929	.926	.44797

a. Predictors: (Constant), POLFREEDOMREC, FDIINFLOW, EACUMEMBERSHIP, FOREIGNTRADETURNOVER, INFLATION, EXCHANGERATE, INFRASTRUCTURE, UNEMPLOYMENT, WTOMEMBERSHIP, VOLUMEOFOIL, POPULATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	704.662	11	64.060	319.224	.000[b]
	Residual	53.781	268	.201		
	Total	758.443	279			

a. Dependent Variable: GDP

b. Predictors: (Constant), POLFREEDOMREC, FDIINFLOW, EACUMEMBERSHIP, FOREIGNTRADETURNOVER, INFLATION, EXCHANGERATE, INFRASTRUCTURE, UNEMPLOYMENT, WTOMEMBERSHIP, VOLUMEOFOIL, POPULATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.168	.644		3.367	.001
	WTOMEMBERSHIP	.174	.075	.053	2.318	.021
	FDIINFLOW	-.002	.005	-.006	-.335	.738
	INFLATION	-.002	.001	-.027	-1.532	.127
	UNEMPLOYMENT	.007	.008	.019	.901	.369
	POPULATION	.115	.039	.093	2.934	.004
	FOREIGNTRADETURNOVER	.839	.026	.814	32.053	.000
	INFRASTRUCTURE	4.867	1.953	.047	2.492	.013
	EXCHANGERATE	.000	.000	.071	3.992	.000
	VOLUMEOFOIL	2.016E-6	.000	.141	5.624	.000
	EACUMEMBERSHIP	.123	.115	.018	1.063	.289
	POLFREEDOMREC	-.130	.062	-.061	-2.103	.036

a. Dependent Variable: GDP

Based on indicated coefficients we obtain the regression equation for Model 2:

$$GDP=2.168+0.174x_1-0.002x_2-0.002x_3+0.007x_4+0.115x_5+0.839x_6+4.867x_7+0.000x_8+ +0.000252x_9+0.000002x_{10}+0.123x_{11}-0.130x_{12+}\varepsilon$$

Where, x_1=WTO membership, x_2=FDI inflow, x_3=inflation, x_4=inflation, x_5=unemployment, x_6=population, x_7=foreign trade turnover, x_8=infrastructure, x_9=exchange rate, x_{10}=volume of oil, x_{11}=EACU membership, x_{12}=political freedom, ε= random error.

As it is demonstrated in the table, the p-value is less than 0.05 what states, that at least one of the independent variables is statistically significant and has an impact on the economic performance of the country. It is possible to argue that this model is acceptable for implications. In addition, in order to test the null hypothesis, we turn to F-test that requires an analysis of the variance identified in the ANOVA table. From the data it can be ascertained that the value of the calculated F is 319.2 for the variance generated by the regression is higher that the critical value of F, at the significance level of 0.05 with 11 degrees of freedom at numerator and 268 at denominator, that is 1.824. By comparing the values of F-test it can be stated that given multiple regression model indicates overall significant and dependent variable strongly is explained by exogenous regressors.

The coefficient of determination R^2, indicating the ratio of the total variance that is explained by the model, is 92.9%. The analysis of variance for multiple regression will be conducted from the following results.

Results of the multiple linear regression, where the dependent variable is GDP are demonstrated as follows. The independent variable WTO membership has a p-value of 0.021 that is considered to be statistically significant. We can reject the null hypothesis of no relationship between country's GDP and WTO membership. WTO members have 0.174% higher GDP on average than GDP of countries which are not WTO members at 5% significance level. Furthermore, as it is depicted in the table, we can highlight the importance of foreign trade turnover, exchange rate and volume of oil production as the most influential determinants on GDP, since their coefficients are statistically significant at 99% confidence level. Moreover, the t-value of the variable "foreign trade turnover" equals to 32.053, which indicates highly strong evidence for existence of relationship with GDP, comparing to other regressors. In addition, we can notice that among other indicators, which perform no impact on economic growth, some of them have a positive impact on GDP (e.g. population, infrastructure and political freedom). At 5% of significance level, increase of 1% percent of population is associated with a country's growth of GDP on average of 0.1%. Similar effects can be observed by foreign trade turnover, infrastructure (1 additional km), exchange rate (1 additional dollar) and volume of oil production (1 additional barrel), where GDP tends to increase by 0.8%, 4.9%, 0.0002%, 0.000002%, respectively. In addition, it is demonstrated, that the decrease of authoritarian regime in state will lead to 0.06% of growth of GDP.

In order to provide more concrete results, the multiple regression analysis was conducted only with significant variables (WTO membership, foreign trade turnover, volume of oil production, infrastructure, political freedom, exchange rate, and population).

Table 3. Regression analysis with dependent and significant independent variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963[a]	.928	.926	.44855

a. Predictors: (Constant), EXCHANGERATE, FOREIGNTRADETURNOVER, INFRASTRUCTURE, WTOMEMBERSHIP, VOLUMEOFOIL, POLITICALFREEDOMC, POPULATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	703.717	7	100.531	499.659	.000[b]
	Residual	54.726	272	.201		
	Total	758.443	279			

a. Dependent Variable: GDP

b. Predictors: (Constant), EXCHANGERATE, FOREIGNTRADETURNOVER, INFRASTRUCTURE, WTOMEMBERSHIP, VOLUMEOFOIL, POLITICALFREEDOMC, POPULATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.221	.622		3.570	.000
	WTOMEMBERSHIP	.217	.071	.066	3.037	.003
	VOLUMEOFOIL	2.116E-6	.000	.148	5.978	.000
	EXCHANGERATE	.000	.000	.076	4.411	.000
	INFRASTRUCTURE	4.707	1.945	.046	2.419	.016
	FOREIGNTRADETURNOVER	.833	.024	.808	34.125	.000
	POPULATION	.118	.038	.096	3.127	.002
	POLFREEDOMREC	-.105	.054	-.049	-1.951	.052

a. Dependent Variable: GDP

Based on the indicated coefficients we obtain the regression equation for Model 3:

$$GDP=2.221+0.217x_1+0.000002x_2+0.000252x_3+4.707x_4+0.833x_5+0.118x_6-0.105x_7+\varepsilon$$

Where, x_1=WTO Membership; x_2=volume of oil production; x_3=exchange rate; x_4=infrastructure; x_5=foreign trade turnover; x_6=population, x_7=political freedom.

The coefficient of determination R^2 is 92.8%. The analysis of variance for multiple regression will be made starting from the following results.

As it is depicted in the table, after exclusion of some of the factors, the importance of WTO membership has increased, because it captured some effect of unemployment, with which it is highly correlated. The impact of foreign trade turnover also has increased according to t-value (34.125). However, among 7 determinants, the influence of two of them, which are political freedom and infrastructure, has been declined (from 0.13 to 0.016 and from 0.36 to 0.52, respectively). Eventually, the factor of political freedom indicates no effect on economic growth.

Additionally, the regression analysis has been conducted without independent variable in order to assess the changes in control variables.

Table 4. Regression analysis without key independent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963[a]	.928	.925	.45160

a. Predictors: (Constant), POLITICALFREEDOMC, FDIINFLOW, EACUMEMBERSHIP, FOREIGNTRADETURNOVER, INFLATION, EXCHANGERATE, INFRASTRUCTURE, UNEMPLOYMENT, VOLUMEOFOIL, POPULATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	703.583	10	70.358	344.998	.000[b]
	Residual	54.859	269	.204		
	Total	758.443	279			

a. Dependent Variable: GDP

b. Predictors: (Constant), POLITICALFREEDOMC, FDIINFLOW, EACUMEMBERSHIP, FOREIGNTRADETURNOVER, INFLATION, EXCHANGERATE, INFRASTRUCTURE, UNEMPLOYMENT, VOLUMEOFOIL, POPULATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.491	.634		3.929	.000
	FDIINFLOW	-.003	.005	-.010	-.593	.554
	INFLATION	-.002	.001	-.031	-1.776	.077
	UNEMPLOYMENT	.009	.008	.025	1.159	.247
	POPULATION	.094	.038	.076	2.454	.015
	FOREIGNTRADETURNOVER	.840	.026	.815	31.821	.000
	INFRASTRUCTURE	4.194	1.947	.041	2.155	.032
	EXCHANGERATE	.000	.000	.066	3.725	.000
	VOLUMEOFOIL	2.081E-6	.000	.145	5.776	.000
	EACUMEMBERSHIP	.189	.113	.028	1.683	.093
	POLITICALFREEDOMC	-.082	.058	-.038	-1.396	.164

a. Dependent Variable: GDP

Based on the indicated coefficients we obtain the regression equation for Model 4:

$$GDP=2.491-0.003x_1-0.002x_2+0.009x_3+0.094x_4+0.840x_5+4.194x_6+0.000219x_7+0.000002x_8 + +0.189x_9-0.082x_{10}+ \varepsilon$$

Where, x_1=FDI inflow; x_2=inflation; x_3=unemployment; x_4=population; x_5=foreign trade turnover; x_6=infrastructure; x_7=exchange rate; x_8=volume of oil production; x_9=EACU membership; x_{10}=political freedom.

The coefficient of determination R^2 is 92.8%. The analysis of variance for multiple regression will be made starting from the following results.

In this model, examining the relationship without key independent variable – WTO membership, we can see that half of the variables have remained insignificant, even after experiencing an increase of level of significance (FDI inflow, inflation, unemployment, EACU, political freedom). The most influential factors are still the same: foreign trade turnover, exchange rate and volume of oil production).

And finally, the last regression analysis has been conducted in order to see the influence of WTO membership on GDP without the most significant variable – foreign trade turnover. The results are presented below.

Table 5. Regression analysis without Foreign trade turnover variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.811[a]	.657	.645	.98303

a. Predictors: (Constant), POLITICALFREEDOMC, FDIINFLOW, EACUMEMBERSHIP, EXCHANGERATE, INFLATION, VOLUMEOFOIL, INFRASTRUCTURE, UNEMPLOYMENT, WTOMEMBERSHIP, POPULATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	498.493	10	49.849	51.585	.000[b]
	Residual	259.950	269	.966		
	Total	758.443	279			

a. Dependent Variable: GDP

b. Predictors: (Constant), POLITICALFREEDOMC, FDIINFLOW, EACUMEMBERSHIP, EXCHANGERATE, INFLATION, VOLUMEOFOIL, INFRASTRUCTURE, UNEMPLOYMENT, WTOMEMBERSHIP, POPULATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10.984	1.278		8.596	.000
	WTOMEMBERSHIP	.199	.165	.060	1.208	.228
	FDIINFLOW	.008	.010	.030	.794	.428
	INFLATION	-.005	.003	-.069	-1.803	.073
	UNEMPLOYMENT	-.080	.015	-.225	-5.221	.000
	POPULATION	.730	.075	.590	9.762	.000
	INFRASTRUCTURE	9.654	4.273	.094	2.260	.025
	EXCHANGERATE	.000	.000	.095	2.455	.015
	VOLUMEOFOIL	5.581E-6	.000	.390	7.465	.000
	EACUMEMBERSHIP	.221	.253	.033	.873	.383
	POLITICALFREEDOMC	.682	.123	.321	5.535	.000

a. Dependent Variable: GDP

Based on the indicated coefficients we obtain the regression equation for

Model 5:

$$GDP=10.984+0.199x_1+0.008x_2 -0.005x_3-0.080x_4+0.730x_5-9.654x_6+0.000315x_7+0.000006x_8 + +0.221x_9+ 0.682x_{10}+ \varepsilon$$

Where, x_1=WTO membership; x_2=FDI inflow; x_3=inflation; x_4=unemployment; x_5=population; x_6=infrastructure; x_7=exchange rate; x_8=volume of oil production; x_9=EACU membership; ; x_{10}=political freedom.

The coefficient of determination R^2 indicating the percent of how much of the total variance is explained by the independent variable is 65.7%, indicating about the absence of the significantly influential variable. The analysis of variance for multiple regression will be made starting from the following results.

According to the results, we can see that after exclusion the "foreign trade turnover" variable the significance level of the WTO has decreased. Since 0.228 is more than p-value of 0.05, the independent variable has become insignificant. At the same time, some of the factors are quite significant, such as political freedom, population, unemployment, infrastructure, exchange rate and volume of oil production.

From the 5-step model manipulation trial, it can be concluded that best model explaining the given relationship is the third one, i.e.

$$GDP=2.221+0.217x_1+0.000002x_2 +0.000252x_3+4.707x_4+0.833x_5+0.118x_6-0.105x_7+ \varepsilon$$

Where, x_1=WTO Membership; x_2=volume of oil production; x_3=exchange rate; x_4=infrastructure; x_5=foreign trade turnover; x_6=population, x_7=political freedom.

The conclusion of model specification arises from the comparison of R-squared and Adjusted R-squared estimators. We observe highest R-squared in Models 2, 3 and 4. However, when we switch from the 2nd to 3rd model, eliminating all insignificant variables, Adjusted R-squared stays the same, since it has a feature of penalizing for additional variables, which have no explanatory nature. Moving to model 4, excluding our variable of interest, i.e. WTO, Adjusted R-squared decreases, meaning that the WTO still has explanatory power of GDP and it should not be dropped from the model. Thus, Model 3 can be developed and estimated further.

In the following table we give a summary table, which contains the regression results from the five scenarios with the corresponding F-statistics and R-squared and Adjusted R-squared coefficient.

Table 6. Summary Results of Regression and Model Fit

	Dependent variable (GDP growth)				
Controlling variables	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5
Constant	24.015***	2.168***	2.221***	2.491***	10.984***
WTO membership	-0.529***	0.174**	0.217***		0.199
FDI inflow		-0.002		-0.003	0.008
Inflation		-0.002		-0.002*	-0.005*
Unemployment		0.007		0.009	-0.080***

Population		0.115***	0.118***	0.094**	0.730***
Foreign trade turnover		0.839***	0.833***	0.840***	
Infrastructure		4.867**	4.707**	4.194**	9.654**
Exchange rate		0.000***	0.000***	0.000***	0.000***
Volume of oil		2.016E-6***	2.116E-6***	2.081E-6***	5.581E-6***
EACU membership		0.123		0.189***	0.221
Freedom and Democracy		-0.130**	-0.105*	-0.082	0.682***
F statistics	7.336	319.224	499.659	499.659	51.585
F-statistics significance level	0.000	0.000	0.000	0.000	0.000
R-square	0.026	0.929	0.928	0.928	0.657
Adjusted R-square	0.022	0.926	0.926	0.925	0.645
*** statistically significant at 1% level ** statistically significant at 5% level * statistically significant at 10% level					

Chapter 5. Summary and Conclusion

The present study aimed to examine the relationship between economic growth and the membership of a country in the World Trade Organization in the pre- and post-accession period. Using a sample of fourteen former Soviet Union countries (Azerbaijan, Armenia, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Ukraine, Uzbekistan) a multiple regression tool has been utilized in order to examine the impact of Independent variable- WTO membership over Dependent variable- GDP, which has been taken as a common indicator of economic growth through the range of control variables (FDI inflow, inflation and unemployment rate, population, foreign trade turnover, infrastructure, exchange rate, volume of oil production, EACU membership, political freedom). The research captures the period of time from 1998 to 2017 due to the reason of data availability for these particular years.

The main findings obtained from the multiple regression models show that WTO membership has a statistically positive relationship on economic growth in the FSU countries. More specifically, according to our base model (model 3), the WTO member countries on average have 0.066% higher GDP compared to the countries which aren't members of WTO. Furthermore, we observed the significance of WTO membership when controlling it for the foreign trade turnover, which strengthens its importance. As such, when the foreign trade turnover variable was eliminated, the R-squared coefficient declined by almost 30 p.p. indicating a high explanatory power of foreign trade turnover and

possibly a high correlation between WTO membership and foreign trade turnover.

Having all this in mind, we conclude that the WTO membership will be fruitful for countries if it is followed by s significant foreign trade turnover which has been demonstrated as one of the most highly significant variables in the regression models. Additionally, other controlling variables such as volume of oil production, exchange rate, infrastructure, foreign trade turnover population and political freedom have a statistically significant effect on the GDP. Out of these, only Political freedom index has a negative relation with GDP growth in the model 3 after concentration only on statistically significant variables, while the others have a positive impact on economic performance. Having in mind, that the negative relation between GDP and political freedom index is contra intuitive (we would assume that more democratic countries will have a higher GDP indicator) it can be suggested that the reason can be the sample of countries included in the regression. More precisely, the included countries have a relatively low rank in the Political freedom index, indicating a possible bias, thus if we included a bigger number of countries (more highly ranked countries in Political freedom index countries) it would be possible for the indicator show positive relation to GDP.

Finally, from the extracted findings some possible recommendations could be given to the government of the Republic of Uzbekistan:

- To establish and enhance multilateral trade agreements with the purpose of increasing its foreign trade turnover, which will result in the maximization of the benefits from the possible WTO membership;
- Protection measures and import duties should be decreased to stimulate the competition in domestic market;
- A special emphasis should be given in improving infrastructure, since this variable is statistically significant but also has a relatively larger magnitude (impact) in comparison with the other coefficients (judging according to the beta coefficients).
- Measures in increase of the volume of oil production and trade should be taken for acceleration of economic growth;
- Low inflation rate should be stabilized in aim for promotion of effective use of productive resources, uncertainty avoidance, attraction of investments, prevention of arbitrary redistribution of income and wealth and eventually reaching economic growth.
- For the condition of correlation of economic growth with authoritarian regime in the state, this type of governing should be followed by the interests of population and the country, because the success of the political path will serve, eventually, as a pattern of a state development.

Lastly, having in mind that the WTO accession process by itself requires, the reduction of barriers and stimulating the trade turnover, we can conclude that the Republic of Uzbekistan will have positive economic effects from the WTO membership.

Chapter 6. Limitations and Recommendations

This chapter discusses some existing limitations and reflect the recommendations which could be addressed in future study.

As it has been previously noted, the sample of conducted research were the former Soviet Union countries, which are Moldova, Estonia, Latvia, Lithuania, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Russia, Armenia, Azerbaijan, Georgia, and Ukraine for the period of 1998-2017. However, due to unavailability of the data presented for investigated variables of Turkmenistan, the country has been excluded from the list of the studied states. Future longitudinal studies are encouraged to obtain the required data from governmental offices of Turkmenistan for the full capture of post-Soviet Union countries sample.

Furthermore, in the following research the concept of economic growth has been discussed from different perspectives. However, GDP has been utilized as a common indicator of the measurement of economic performance of the Former Union states. In this regard, future studies might want to investigate economic growth using another indicators, which can depict other trends of economic development, discussed above (Chapter 2).

Generally, the purpose of the study was to identify the effect of the WTO membership on economic growth of the post-Soviet Union countries before and after the accession to the organization. Considering that the Republic of Kyrgyzstan obtained the membership in 1998, this research could not observe

the economic performance of the state before the accession to the WTO, as the study is concentrated on the period of 1998-2017. Due to the reason that the data for earlier years was not available for a number of the investigated countries the effect of WTO membership could not be fairly measured for this particular country. Future research might want to specifically look at the economic development of Kyrgyz Republic, for which economic indicators of earlier years could not been obtained.

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Abstract in Korean

세계무역기구 가입이 체제전환국의 경제발전에 미치는 영향 분석

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2017년 9월 우즈베키스탄 정부는 세계무역기구(World Trade Organization, WTO) 가입 협상 중단 절차를 재개했다. 그런 점에서 세계무역기구 가입이 국가 경제 성장에 미치는 영향은 특히 우즈베키스탄 공화국이 세계무역기구 내 성공적인 성과를 위해 중요한 조치를 취하고 적절한 정책을 적용하기 위해 관련성이 크다. 이러한 배경에 맞서 1998년부터 2017년까지 14개 구 소비에트 연방 국가들의 경험과 성과를 분석해 왔다. 본 논문의 목적은 세계무역기구 회원국이 경제성장의 지표로 간주되어 온 경제성장에 미치는 영향을 분석하는 것이다. 세계무역기구가 국내 총생산(Gross Domestic Product, GDP)에 미치는 영향을 평가하기 위한 도구로 다중회기분석을 채택하였다.

본 논문에서는 세계무역기구 가입이 국내 총생산 성장에 0.05의 유의수준에서 작용하는 통계적으로 유의하고 긍정적인 영향을 발견하였다. 게다가 상당한 해외 무역 거래량, 높은 양의 석유 생산량, 발전된 기반시설, 그리고 안정된 낮은 인플레이션율이 뒤따를 경우, WTO 가입은

우즈베키스탄에 득이 될 것으로 관측되었다. 그런 점에서 세계무역기구 가입은 경제성장을 목표로 하는 우즈베키스탄 공화국의 전제조건으로 고려되어야 한다.

주제어: 세계무역기구(WTO), 경제성장률, 국내총생산(GDP), 구 소비에트 연방 국가, 다자무역
학번: 2018-29448